

### Remarks

Claims 15-19, 22 and 46 are pending. Claims 15 and 22 are amended.

#### *Information Disclosure Statement*

The Official Action states that WO '758 or US '345, which were discussed and cited in the Examiner Interview of February 5, 2008, were not cited in an Information Disclosure Statement and selectively quotes portions of 37 CFR 1.56(a). There is no evidence on this record contrary to the duty of candor and good faith. The facts on this record are that WO '785 and US '345 have been on this record and are addressed below in detail.

#### *Claims Rejections*

Claims 15-19, 22 and 46 stand rejected under 35 USC §112, second paragraph, as failing to particularly point out or distinctly claim the subject matter regarded as the invention. Specifically, the rejection states that the recitation of "the composite material satisfies at least two of the following properties," and only two properties are listed in Claims 15 and 22.

Claims 15 and 22 have been amended to recite "the composite material satisfies the following properties." The Applicants respectfully request reconsideration and withdrawal of the rejection.

Claims 15-17, 19, 22 and 46 stand rejected for nonstatutory obviousness-type double patenting over Wadahara in view of Lewis. Claim 18 is rejected for nonstatutory obviousness-type double patenting over Wadahara in view of Bockrath.

A duly executed Terminal Disclaimer is enclosed. Withdrawal of the rejection is respectfully requested.

Claims 15-17, 19, 22 and 46 stand rejected under 35 USC §103(a) as unpatentable over Wadahara in view of Lewis. The rejection states that Wadahara discloses a preform comprising a thermosetting resin as a matrix resin, a plurality of stacked and integrated substrates, and a powder-interlamina-toughening resin material with the properties recited in Claim 15, but fails to disclose the specific gap distances recited in Claims 15-17, 19, 22 and 46. The rejection states that it would have been obvious to look to Lewis, which allegedly mentions a gap distance of 1 mm. The rejection further states that it would have been obvious to modify the teaching of Lewis to obtain a gap distance between 0.1 to 1 mm.

Lewis discloses a webbing material using reinforced fibers as weft yarn for being applied to a filament winding-like molding as shown in Fig. 4. The webbing material is distinct from the

subject matter of Claims 15-17, 19, 22 and 46, which is applied as a preform for RTF molding and which uses reinforcing fibers as warp yarn to provide the specific properties recited in those rejected claims. Specifically, items (a) and (b) of Claim 15 recite properties such as a compressive strength at a room temperature after impact at an impact energy of 6.67 J/mm determined by a method defined in SACMA-SRM-2R-94 is 240 MPa or more such that the composite material has a 0° compressive strength at a room temperature determined by a method defined in SACMA-SRM-1R-94 is 1,350 MPa or more, and a 0° compressive strength at a high temperature after a hot/wet conditioning determined by the method is 1,100 MPa or more.

There is a bigger problem with Lewis, however. Lewis expressly teaches away from a high warp to fill weight ratio upon which the Applicants' preform is premised. Lewis states that when "the bulk of the fibers constituted the warp strands, the woven fabric or tape lacked the pliability required for many applications and had but limited utility..." (Lewis, column 1, lines 26-30). Both Wadahara and the Applicants' preform are premised on a substrate with a high warp to fill weight ratio. However, Lewis discloses a different structure with a low warp to fill weight ratio and thus teaches away from a substrate with a high warp to fill weight ratio of both the Applicants and Wadahara. This means that one skilled in the art would have no incentive to make the combination and no reasonable expectation of success upon so doing.

More importantly, the Applicants respectfully submit that the gap distance of 0.1 to 1 mm recited in Claim 15 is not obvious in view of Lewis (combined with Wadahara). Lewis teaches "an interstice 20 having the dimensions of about one-half inch x one-sixteenth inch" (Lewis, column 6, lines 16-33). This mathematically corresponds to an interstice of 1.6 mm. It does not correspond to an interstice of "about 1 mm" as recited in the rejection. It is not 1 mm and not "about" one or "about" anything. It is exactly 1.6 mm. An interstice of one-half inch x one-sixteenth inch, *i.e.*, 1.6 mm, is distinct from and outside the range of 0.1 to 1 mm recited in Claim 15. 1.6 mm exceeds the upper limit of 1 mm by more than 50%. The Applicants respectfully submit that there is no motivation to alter the gap distance of Lewis by any amount, much less by 50%.

Furthermore, the claimed gap distance of 0.1 to 1 mm is important in providing excellent moldability with respect to resin impregnation properties in the thickness direction at the state of laminate. The specifically recited gap distance is also important in providing the properties recited with respect to compressive strength of the composite material. Thus, a material of

Wadahara having a gap of 1.6 mm as taught by Lewis would reasonably be expected to not possess those properties.

Accordingly, the Applicants respectfully submit that Lewis discloses subject matter that is distinct from the subject matter recited in the rejected claims. Thus, even if one skilled in the art were to combine Lewis with Wadahara, the result would be a material with different properties and a gap distance of 1.6 mm --- which is far outside of the claimed range of 0.1 to 1 mm. Therefore, the Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 15-17, 19, 22 and 46.

Claim 18 is rejected under 35 USC §103(a) as unpatentable over Wadahara in view of Lewis, and further view of Bockrath. The rejection states that Wadahara discloses a preform comprising a thermosetting resin as a matrix resin, a plurality of stacked and integrated substrates, and a powder-interlamina-toughening resin material with the properties recited in Claim 15, and relies on Lewis for disclosing a gap distance of 1 mm. The rejection concedes that the combination of Wadahara and Lewis fails to disclose a sizing agent, and relies on Bockrath for teaching that it is known in the reinforcing fiber fabric art to apply sizing agents.

As discussed above, the combination of Wadahara and Lewis disclose a material with different structure and properties than the material recited in the rejected claims and a gap distance that is not encompassed by the range 0.1 to 1 mm. Bockrath fails to cure that deficiency. Therefore, the Applicants respectfully request reconsideration and withdrawal of the rejection of Claim 18.

In light of the foregoing, the Applicants respectfully submit that the entire application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,



T. Daniel Christenbury  
Reg. No. 31,750  
Attorney for Applicants

TDC/vbm  
(215) 656-3381